AC-F1E

SERVICE MANUAL

D01

January, 1982

SPECIFICATIONS

Power requirements	110–240 V ac ±10% 50/60 Hz
Power consumption	65 W
Output voltage	14 V dc
Output current	2.0 A
Charging voltage	17 V dc
Charging current	2.3 A
Rechargeable batteries	NP-1 battery pack only
Operating temperatures	0°C to 40°C (32°F to 104°F)
Storage temperatures	−20°C to +65°C (−4°F to +149°F)
Dimensions	Approx. 108×80×305 mm (w/h/d) ($4\frac{3}{8}\times3\frac{1}{4}\times12\frac{1}{8}$ inches) not including projecting parts
Weight	Approx. 1.9 kg (4 lb 3 oz) net

MICROFILM

AC POWER ADAPTOR

SONY®

ACC

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

SECTION 1
OUTLINE

1-1. LOCATION AND FUNCTION OF PARTS AND CONTROLS

❶ ON/STANDBY button
Press to turn on the unit after setting the POWER switch to ON. The lamp on the button will light up. Press again so that the unit is in the standby mode, and the lamp will go off.

❷ VTR lamp and ADAPTOR lamp
The left VTR lamp lights while the battery pack inserted into the recorder is being charged and the right ADAPTOR lamp lights while the battery pack inserted into the ac power adaptor is being charged.

❸ CHARGE button
Press to start charging the battery pack.

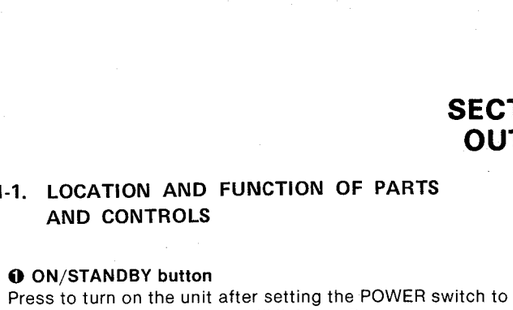
❹ EJECT button
Press to eject the battery pack.

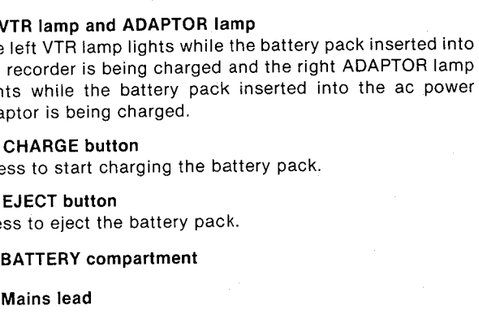
❺ BATTERY compartment

❻ Mains lead

❼ DC OUT cord

❽ POWER switch
Set this switch to ON to supply the power to the unit. Set it to OFF to cut the mains power completely.





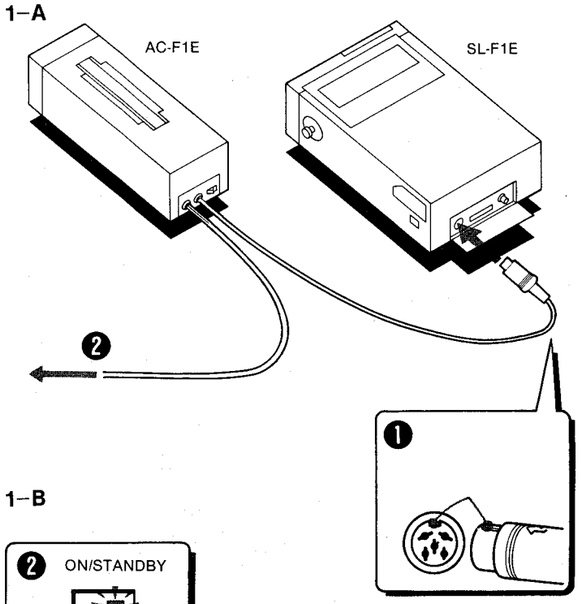
1-2. AC POWER OPERATION OF THE RECORDER

1. Connect the ac power adaptor to the video cassette recorder and plug in the adaptor. (Figure 1-A)

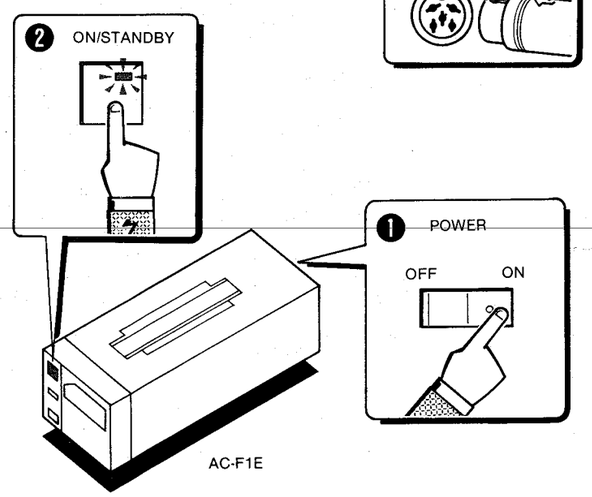
2. Press the ON/STANDBY button on the ac power adaptor after setting the POWER switch to ON. (Figure 1-B) The green lamp will light up and power will be supplied to the recorder. The recorder can be turned on or off with its own ON button.

The recorder cannot be operated when the battery pack is being charged.
Power will not be supplied from the ac power adaptor when a battery pack inside the ac power adaptor is being charged.

1–A



1–B



1-3. CHARGING THE BATTERY PACK

Note on charging temperatures
The battery pack can be charged within the temperature range from 5°C to 40°C (41°F to 104°F). For best results, however, we recommend charging within the temperature range from 10°C to 30°C (50°F to 86°F).
● If the battery pack is charged at a temperature outside the recommended range, or when the battery itself is warm from use, the battery may not be fully charged and the operating time will be shortened.

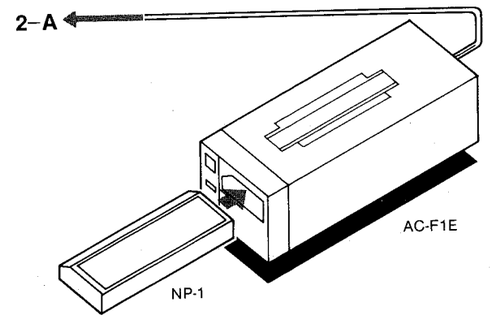
TO CHARGE THE NP-1 RECHARGEABLE BATTERY PACK USING THE AC POWER ADAPTOR ONLY

1. Insert the battery pack into the BATTERY compartment until it clicks and plug in the adaptor. (Figure 2-A)

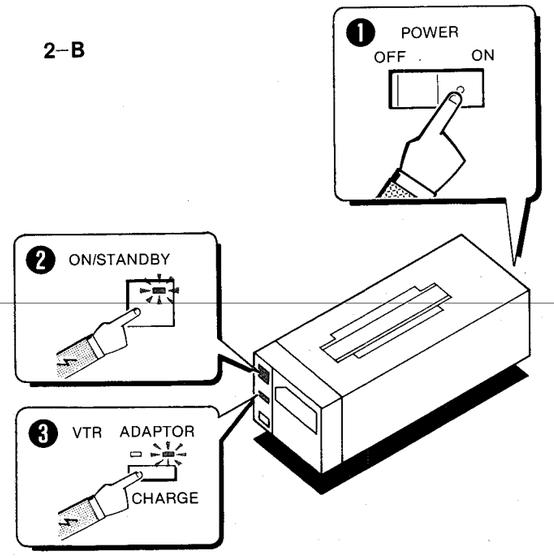
2. Turn on the unit and press the CHARGE button. The right ADAPTOR lamp will light up. (Figure 2-B) The charging time is about 1 hour at normal temperatures.

3. When the battery is fully charged, charging will stop automatically and the lamp goes off. Turn the unit off and press the EJECT button to remove the battery pack. (Figure 2-C)

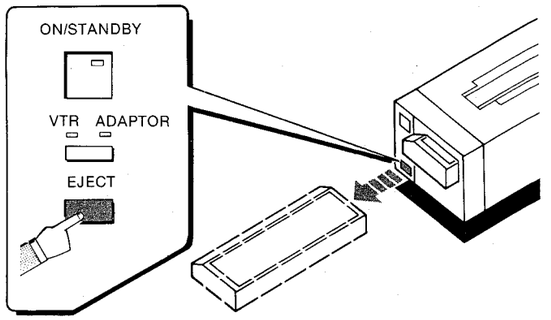
2–A



2–B



2–C



To charge a battery pack inserted into the recorder

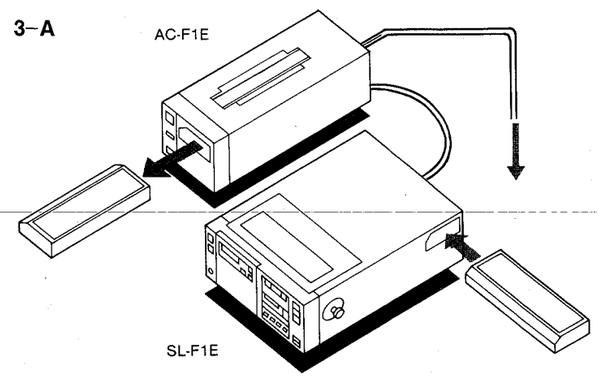
It is not possible to charge two battery packs at the same time.
If the CHARGE button is pressed, when battery packs are inserted into both the recorder and the ac power adaptor, only the battery pack inside the ac power adaptor will be charged.

1. Insert the battery pack into the recorder. Remove the battery pack, if present, from the ac power adaptor. (Figure 3-A)

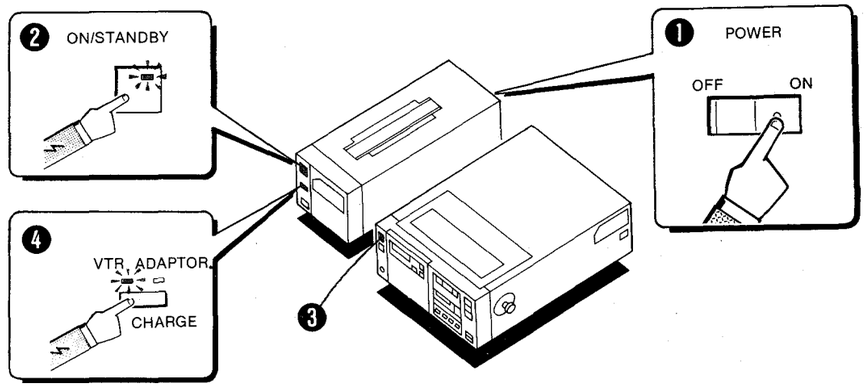
2. Turn the ac power adaptor on, and check that the recorder is turned off. Then press the CHARGE button. (Figure 3-B) The left VTR lamp will light up and charging starts. The charging time is about 1 hour at normal temperatures.

When charging the battery pack inside the recorder, the recorder should be turned off. If the recorder is turned on during charging, charging will stop.

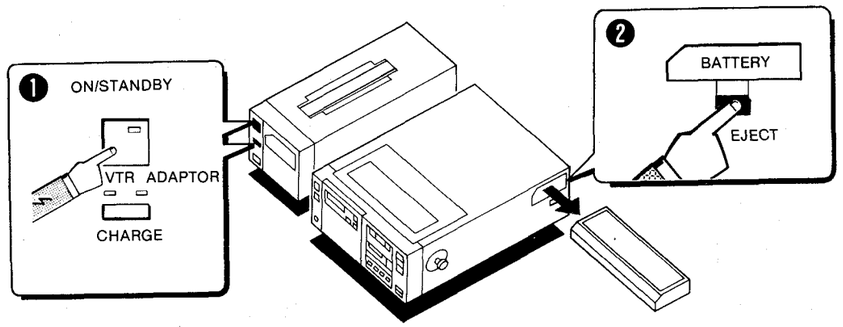
3–A



3–B

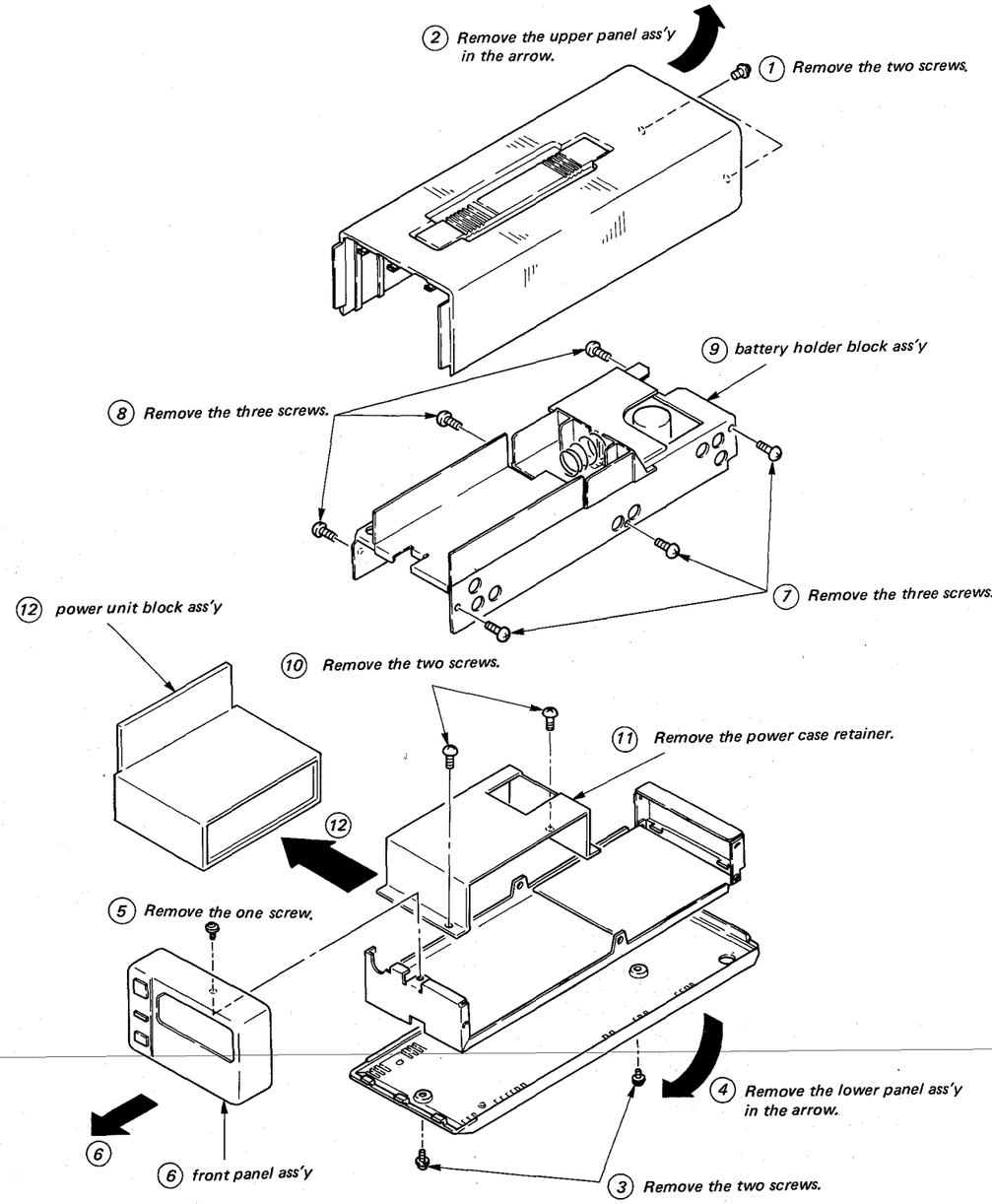


3–C



SECTION 2
DISASSEMBLY

2-1. POWER UNIT BLOCK ASSY REMOVAL


(2) Remove the upper panel ass'y in the arrow.
(1) Remove the two screws.
(9) battery holder block ass'y
(8) Remove the three screws.
(7) Remove the three screws.
(12) power unit block ass'y
(10) Remove the two screws.
(11) Remove the power case retainer.
(12)
(5) Remove the one screw.
(4) Remove the lower panel ass'y in the arrow.
(6)
(6) front panel ass'y
(3) Remove the two screws.

2-2. LOWER PANEL REMOVAL

From SER. NO. 010001 to 013000 F1E model.

The set up to serial number 3000 have warping lower panel ass'y.
Both side adhesive tape is sticked on the warping portion.
Therefore, it is difficult to remove the battery holder block ass'y holding screw (B).
When removing or checking B board and power block, perform procedure as shown in Fig. 1.

(Repair parts of lower panel do not have a warp, so it is not need both side adhesive tape.)

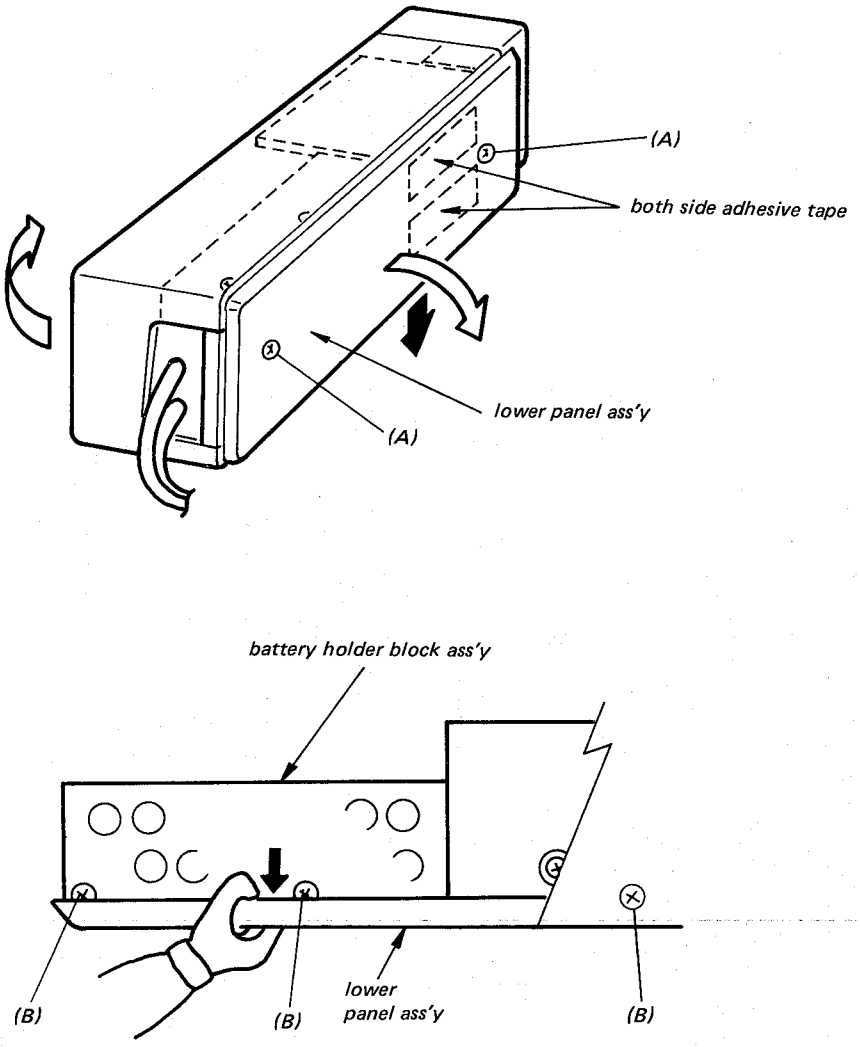


Fig. 1

Remove two lower panel holding screw (A), slide the lower panel ass'y, and remove the battery holder block ass'y holding screw (B).

B E C D

SECTION 3
DIAGRAMS

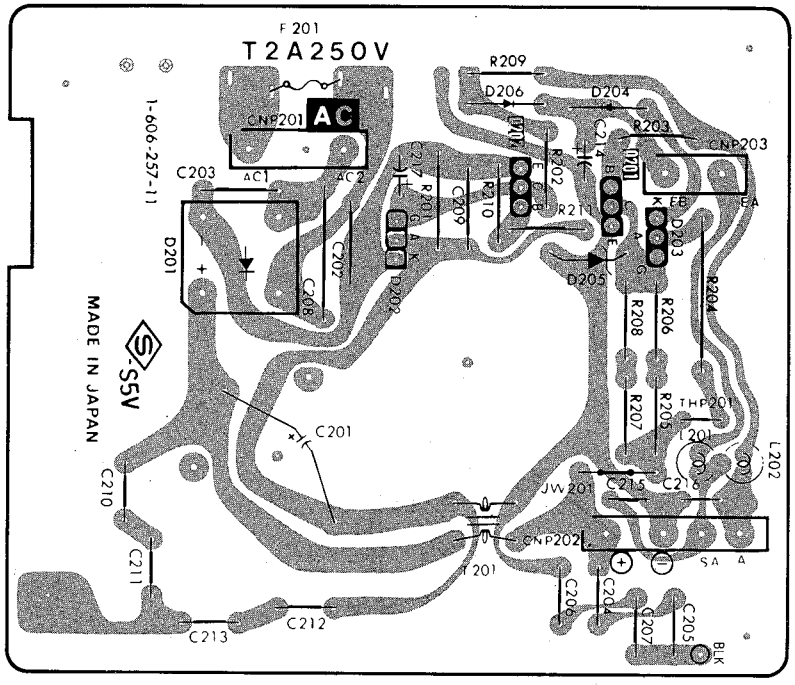
3-1. MOUNTING DIAGRAMS

– Conductor Side –

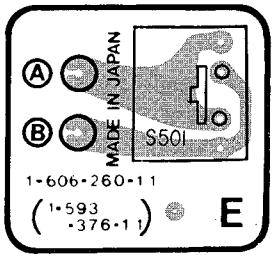
A B C D

1 2 3 4 5

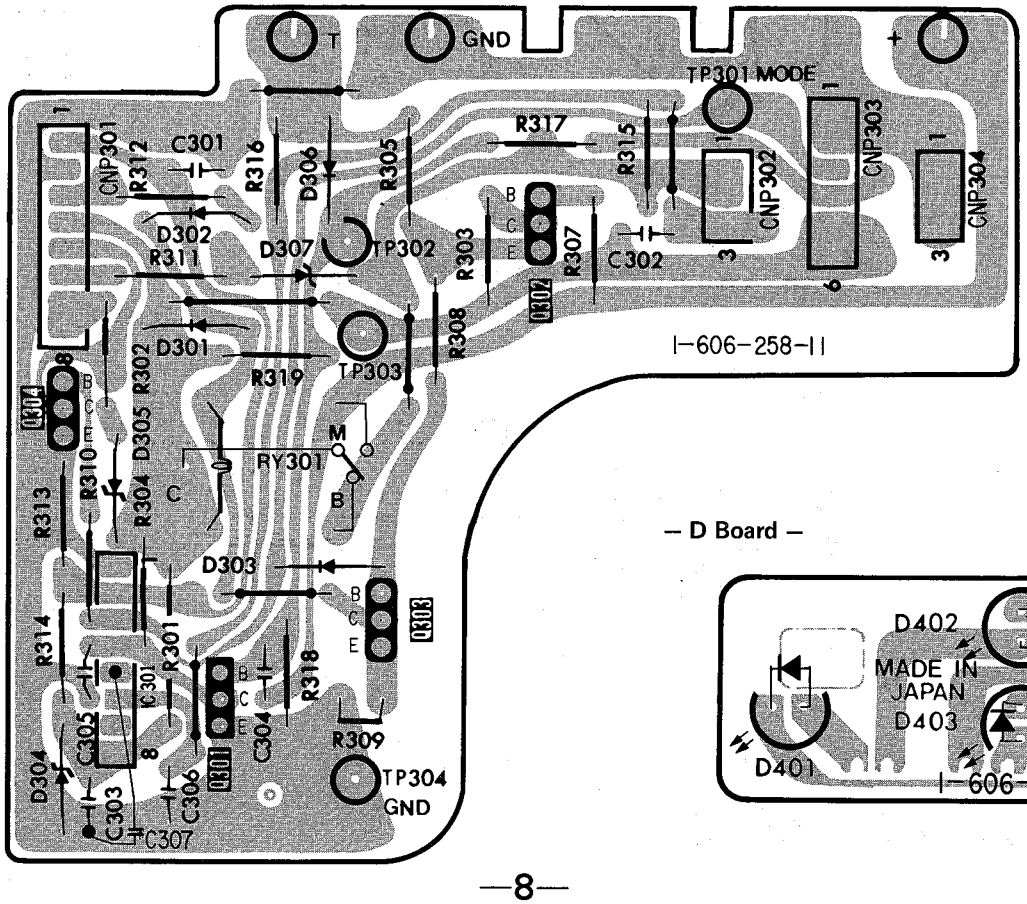
– B Board –



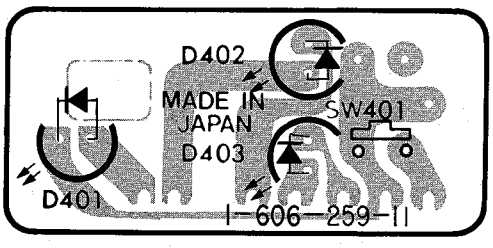
– E Board –



– C Board –



– D Board –

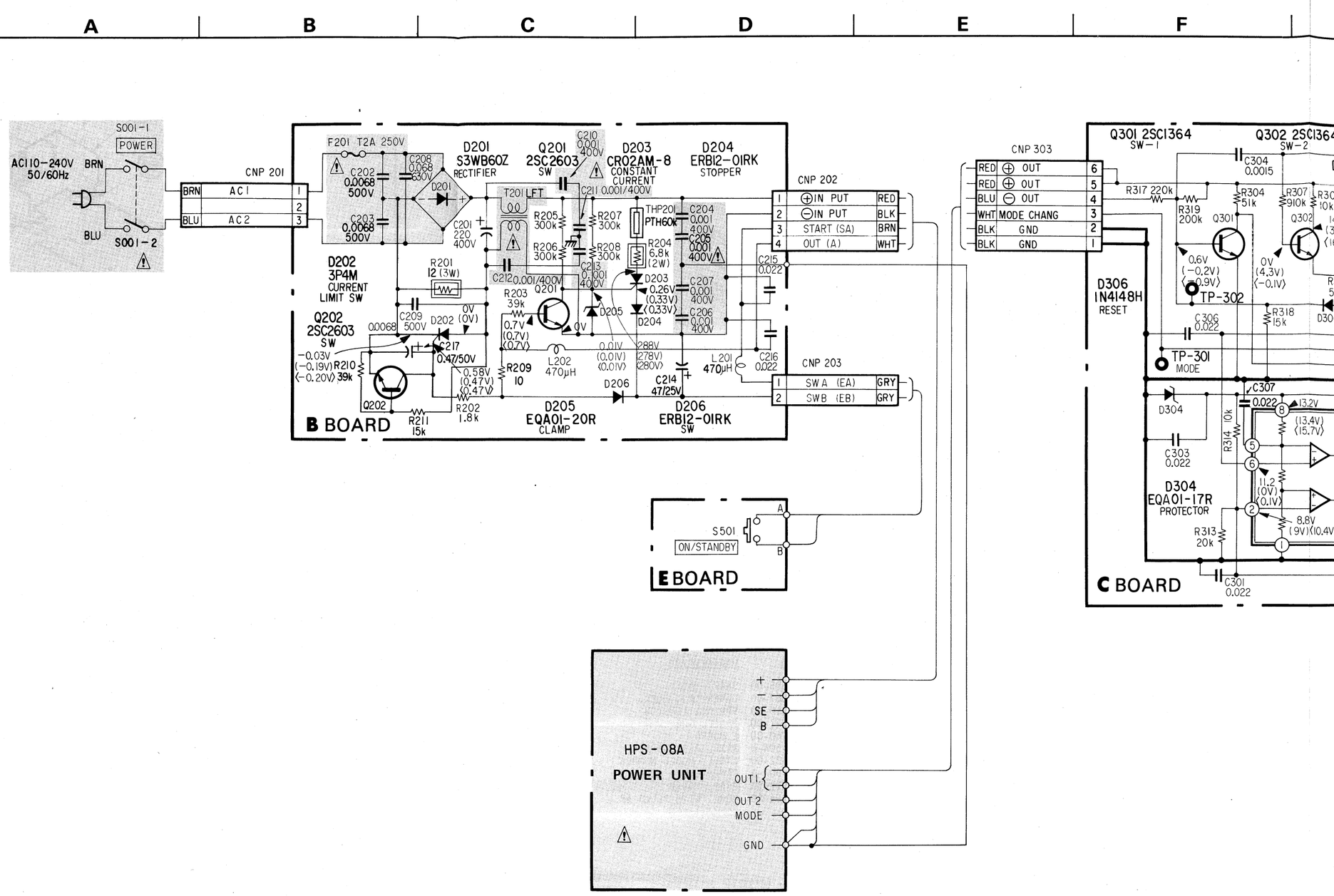


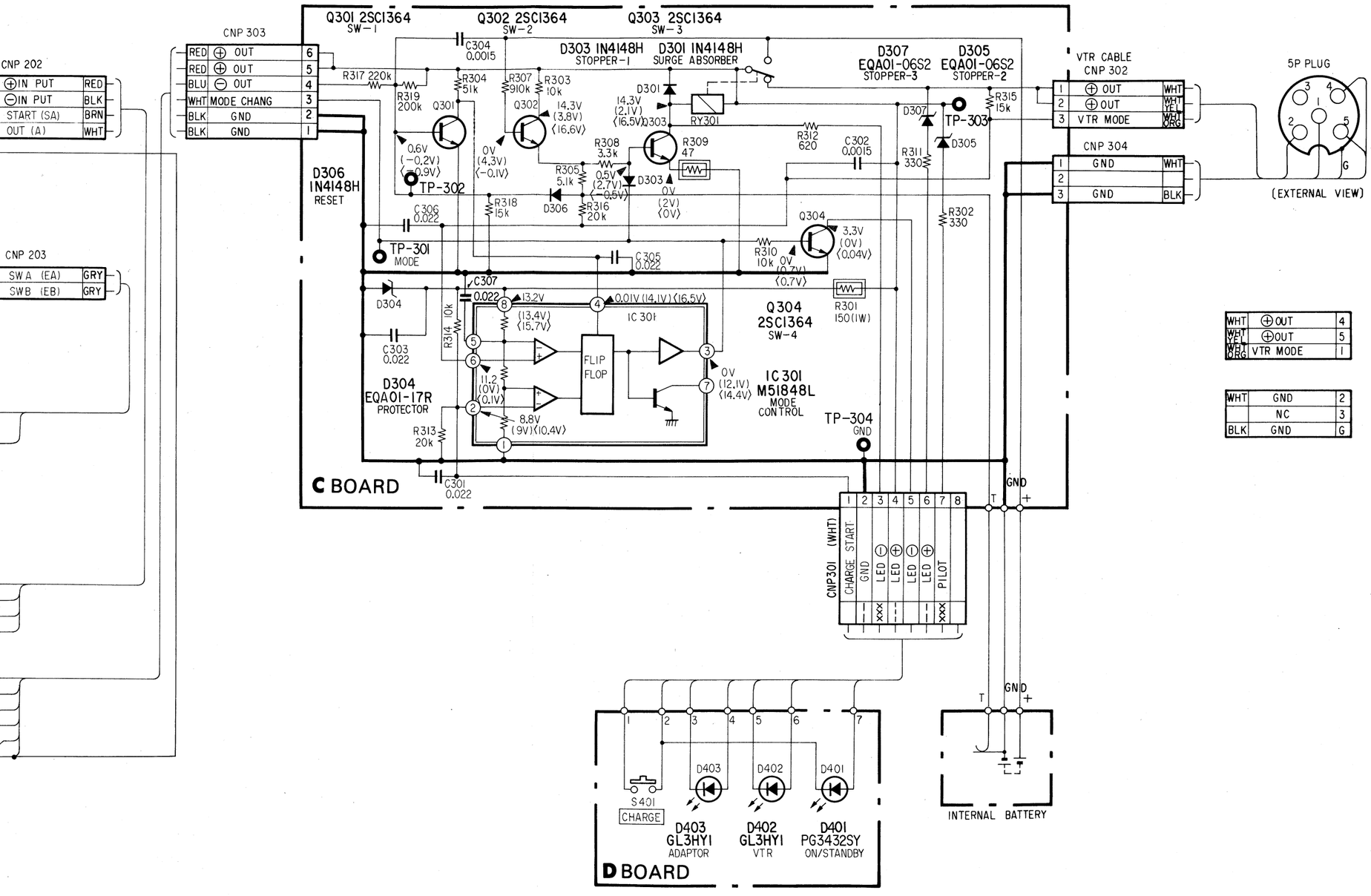
3-2. SCHEMATIC DIAGRAM

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ: 1000Ω; MΩ: 1000kΩ
- ▭ : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 1M-ohm-per-volt DMT.
- Voltage measured in non-charging mode.
- (V): Value measured when AC adapter battery is being charged.
- ——— : B+ bus.
- < V>: Value measured when VTR battery is being charged.

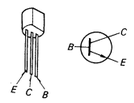



Q301 2SC1364 SW-1
Q302 2SC1364 SW-2
Q303 2SC1364 SW-3
CNP 303
RED ⊕ OUT 6
RED ⊕ OUT 5
BLU ⊖ OUT 4
WHT MODE CHANG 3
BLK GND 2
BLK GND 1
D303 IN4148H STOPPER-1
D301 IN4148H SURGE ABSORBER
D307 EQA01-06S2 STOPPER-3
D305 EQA01-06S2 STOPPER-2
VTR CABLE CNP 302
1 ⊕ OUT WHT
2 ⊕ OUT WHT YEL
3 VTR MODE WHT ORG
CNP 304
1 GND WHT
2
3 GND BLK
5P PLUG
(EXTERNAL VIEW)
R317 220k
R319 200k
R304 51k
R307 910k
R303 10k
C304 0.0015
Q301
Q302
14.3V (3.8V) (16.6V)
D301
14.3V (2.1V) (16.5V)
D303
RY301
R312 620
C302 0.0015
R315 15k
R311 330
TP-303
D307
D305
R308 3.3k
R309 47
R305 5.1k
D306
R316 20k
R318 15k
0.6V (−0.2V) (0.9V)
TP-302
0V (4.3V) (−0.1V)
0.5V (2.7V) (−0.5V)
0V (2V) (0V)
D306 IN4148H RESET
C306 0.022
TP-301 MODE
C305 0.022
Q304
3.3V (0V) (0.04V)
R310 10k
0V (0.7V) (0.7V)
R302 330
R301 150(1W)
C307 0.022
D304
C303 0.022
R314 10k
13.2V
0.01V (14.1V) (16.5V)
(13.4V) (15.7V)
IC 301
Q304 2SC1364 SW-4
FLIP FLOP
D304 EQA01-17R PROTECTOR
11.2 (0V) (0.1V)
8.8V (9V) (10.4V)
0V (12.1V) (14.4V)
IC 301 M51848L MODE CONTROL
R313 20k
TP-304 GND
C BOARD
C301 0.022
GND
CNP301 (WHT)
CHARGE START
GND
LED
LED
LED
LED
PILOT
S401 CHARGE
D403 GL3HY1 ADAPTOR
D402 GL3HY1 VTR
D401 PG3432SY ON/STANDBY
D BOARD
INTERNAL BATTERY
CNP 202
⊕IN PUT RED
⊖IN PUT BLK
START (SA) BRN
OUT (A) WHT
CNP 203
SW A (EA) GRY
SW B (EB) GRY
WHT ⊕OUT 4
WHT YEL ⊕OUT 5
WHT ORG VTR MODE 1
WHT GND 2
NC 3
BLK GND G

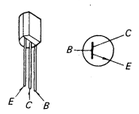
3-3. SEMICONDUCTORS

M51848L

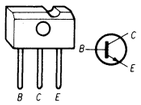
2SC945
2SC1815
2SC2603
JC501



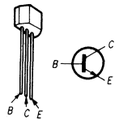
2SC1363
2SC1364



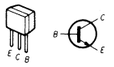
2SC2021



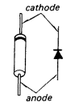
2SC2458



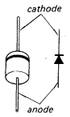
2SC2785



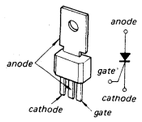
1N4148H
'1S1555
1S2076
1S2473



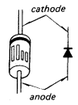
1SS133



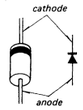
3P4M



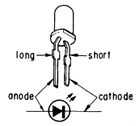
EQA01-06S2
EQA01-17R
EQA01-20R
EQB01-20



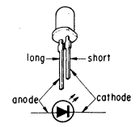
ERB12-01RK
ERB12-04RK



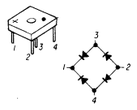
GL3HY1
GL3HY5



PG3432SY



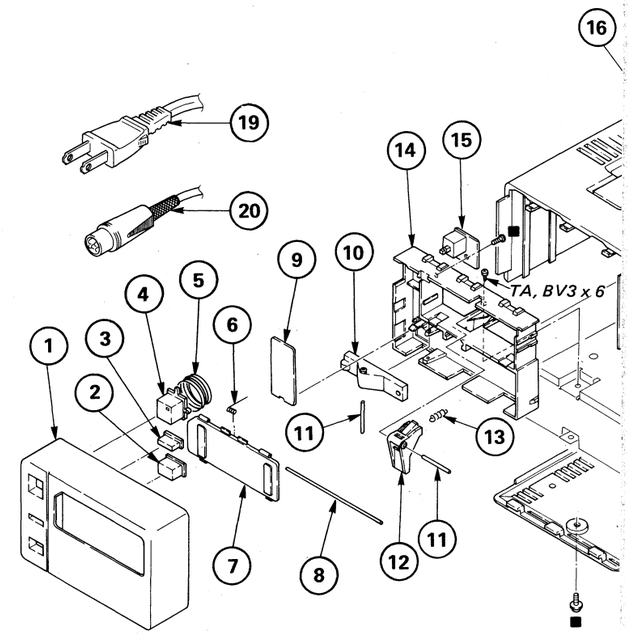
S3WB60Z
S3WB60ZS



SECTION 4
EXPLODED VIEWS

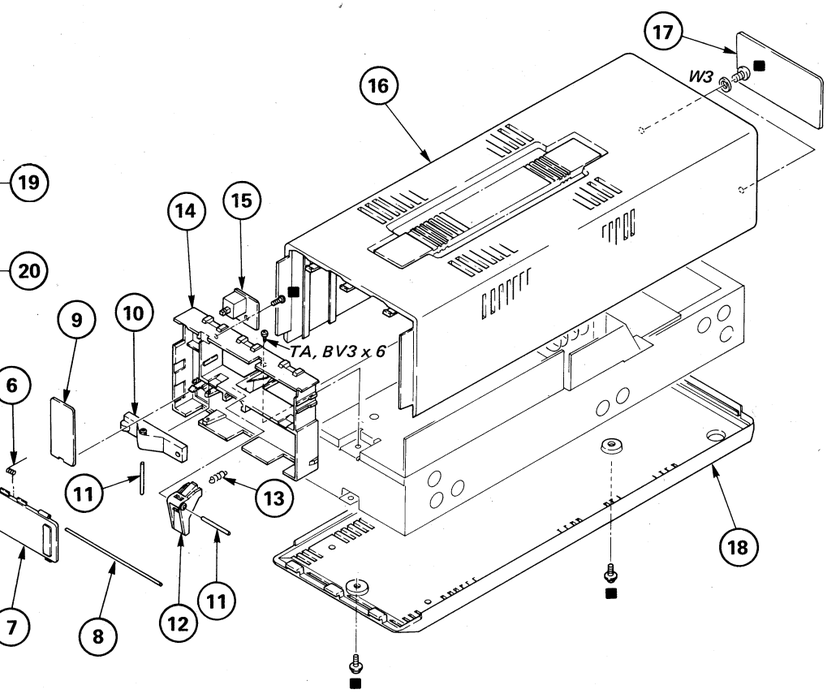
(1) CABINET

■ : TA, BV3 x 8



No.	Part No	Description	Remark
1	X-2360-501-0	PANEL ASSY, FRONT	
2	2-291-503-00	BUTTON (C)	
3	2-291-502-00	BUTTON (B)	
4	X-2291-502-0	BUTTON (A) ASSY	
5	2-291-509-00	SPRING, COMPRESSION	
6	3-669-592-00	SPRING (A), TORSION	
7	3-669-517-41	LID, BATTERY CASE	
8	♦:3-669-521-00	SHAFT (B)	
9	♦:1-606-259-00	D BOARD	
10	♦:2-291-523-00	LEVER (A)	
11	♦:2-291-		
12	♦:2-291-		
13	2-291-		
14	♦:2-291-		
15	♦:1-606-		
16	X-229		
17	♦:2-360-		
18	X-236(		
19	⚠1-534-		
20	1-556-		

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- As to the part numbered with E the electrical parts list.
- Items marked " ♦ " are not stc they are seldom required f service. Some delay should be when ordering these items.

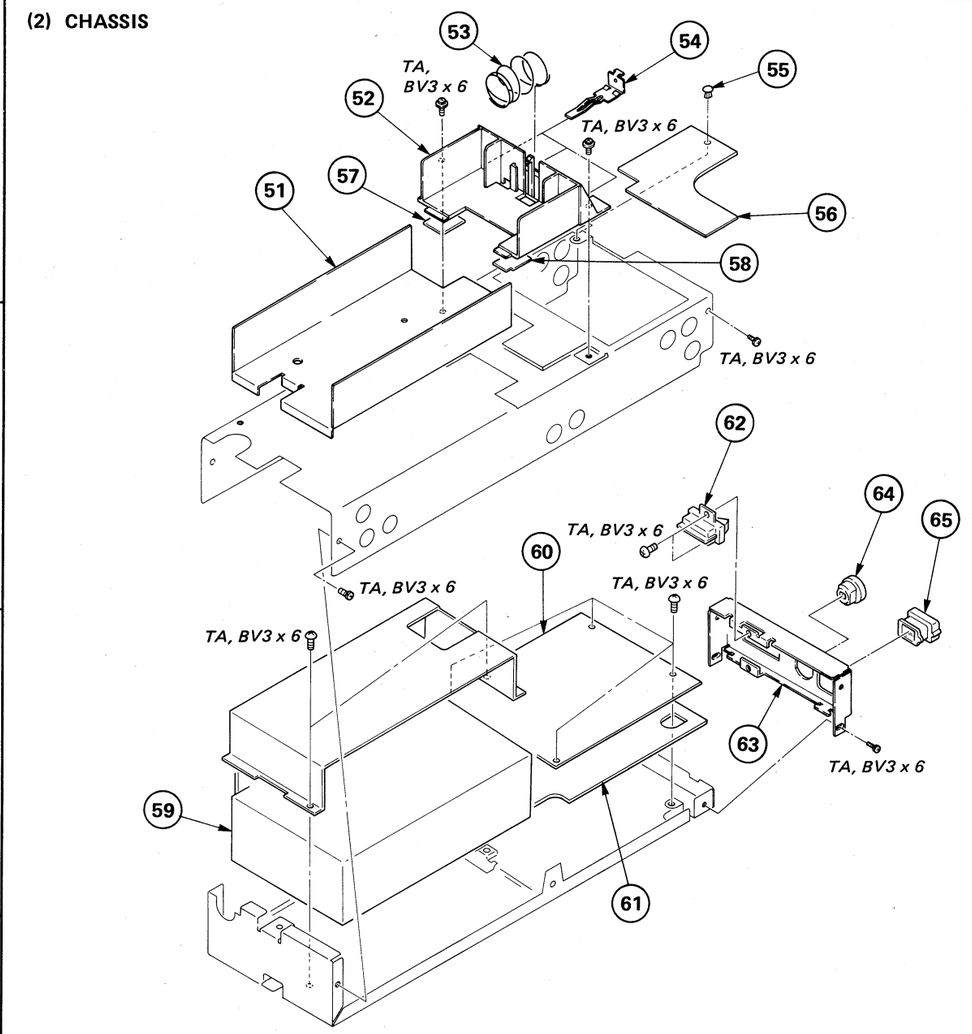


Remark	No.	Part No	Description	Remark
	11	♦:2-291-505-00	SHAFT (A)	
	12	♦:2-291-507-00	LEVER (A), LOCK	
	13	2-291-510-00	SPRING, TENSION	
	14	♦:2-291-527-00	PANEL, SUB	
	15	♦:1-606-260-00	E BOARD	
	16	X-2291-504-0	PANEL ASSY, UPPER	
	17	♦:2-360-522-00	LABEL, MODEL NUMBER	
	18	X-2360-502-0	PANEL ASSY, LOWER	
	19	⚠1-534-817-XX	CORD, POWER	
	20	1-556-156-00	CORD (WITH PLUG) 5P	

- As to the part numbered with E-, refer to the electrical parts list.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

(2) CHASSIS



No.	Part No	Description	Remark
51	♦:2-291-513-00	GUIDE, BATTERY	
52	♦:2-291-529-00	HOLDER, BATTERY	
53	3-669-594-00	SPRING, COMPRESSION	
54	3-669-526-00	TERMINAL	
55	4-812-134-11	RIVET NYLON, 3.5	
56	♦:1-606-258-00	C BOARD	
57	♦:2-360-503-00	INSULATOR (B)	
58	♦:2-360-504-00	INSULATOR (C)	

No.	Part No	Description	Remark
59	⚠A-6704-072-A	POWER UNIT BLOCK ASSY (HPS-08A)	
60	♦:1-606-257-00	B BOARD	
61	♦:2-360-502-00	INSULATOR (A)	
62	⚠1-554-021-00	SWITCH, SEESAW (AC POWER)	
63	2-360-512-00	PANEL, REAR	
64	2-234-904-00	BUSH, CORD	
65	⚠3-703-244-00	BUSHING, CORD	

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- As to the part numbered with E-, refer to the electrical parts list.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 5
ELECTRICAL PARTS LIST

C B

Ref.No	Part No	Description				Remark
	♦:1-606-258-00	C BOARD				
		*******				
		CAPACITOR				
C301	1-101-005-00	CERAMIC	0.022MF		50V	
C302	1-102-119-00	CERAMIC	0.0015MF	10%	50V	
C303	1-101-005-00	CERAMIC	0.022MF		50V	
C304	1-102-119-00	CERAMIC	0.0015MF	10%	50V	
C305	1-101-005-00	CERAMIC	0.022MF		50V	
C306	1-101-005-00	CERAMIC	0.022MF		50V	
C307	1-101-005-00	CERAMIC	0.022MF		50V	
		PLUG				
CNP301	♦1-508-846-00	PIN, CONNECTOR 8P				
CNP302	♦1-508-742-00	PIN, CONNECTOR 3P				
CNP303	♦1-508-845-00	PIN, CONNECTOR 6P				
CNP304	♦1-508-742-00	PIN, CONNECTOR 3P				
		DIODE				
D301	=>8-719-901-33	DIODE 1SS133				
D303	=>8-719-901-33	DIODE 1SS133				
D304	8-719-936-17	DIODE EQA01-17R				
D305	=>8-719-931-06	DIODE EQB01-06				
D306	=>8-719-901-33	DIODE 1SS133				
D307	=>8-719-931-06	DIODE EQB01-06				
		IC				
IC301	8-759-618-48	IC M51848L				
		TRANSISTOR				
Q301	=>8-729-178-54	TRANSISTOR 2SC2785				
Q302	=>8-729-178-54	TRANSISTOR 2SC2785				
Q303	=>8-729-178-54	TRANSISTOR 2SC2785				
Q304	=>8-729-178-54	TRANSISTOR 2SC2785				
		RESISTOR				
R301	1-213-133-00	METAL	150	5%	1W	F
R302	1-246-461-00	CARBON	330	5%	1/4W	
R303	1-246-497-00	CARBON	10K	5%	1/4W	
R304	1-246-514-00	CARBON	51K	5%	1/4W	
R305	1-246-490-00	CARBON	5.1K	5%	1/4W	
R307	1-246-544-00	CARBON	910K	5%	1/4W	
R308	1-246-485-00	CARBON	3.3K	5%	1/4W	
R309	1-202-858-00	COMPOSITION	47		1/4W	F
R310	1-246-497-00	CARBON	10K	5%	1/4W	
R311	1-246-461-00	CARBON	330	5%	1/4W	
R312	1-246-468-00	CARBON	620	5%	1/4W	
R313	1-246-504-00	CARBON	20K	5%	1/4W	
R314	1-246-497-00	CARBON	10K	5%	1/4W	
R315	1-246-501-00	CARBON	15K	5%	1/4W	
R316	1-246-504-00	CARBON	20K	5%	1/4W	
R317	1-246-529-00	CARBON	220K	5%	1/4W	
R318	1-246-501-00	CARBON	15K	5%	1/4W	
R319	1-246-528-00	CARBON	200K	5%	1/4W	
		RELAY				
RY301	1-515-459-00	RELAY				
		POST PIN				
TP301	1-536-354-00	POST PIN				
TP302	1-536-354-00	POST PIN				
TP303	1-536-354-00	POST PIN				
TP304	1-536-354-00	POST PIN				

****

	♦:1-606-257-00	B BOARD				
		*******				
	♦:1-533-087-00	HOLDER, FUSE				
		CAPACITOR				
C201	1-125-285-00	ELECT(BLOCK)	220MF	20%	400V	
C202	⚠1-102-267-00	CERAMIC	0.0068MF		500V	
C203	⚠1-102-267-00	CERAMIC	0.0068MF		500V	
C204	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C205	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C206	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C207	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C208	⚠1-130-819-00	FILM	0.068MF	10%	630V	
C209	1-102-267-00	CERAMIC	0.0068MF		500V	
C210	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C211	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C212	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C213	⚠1-161-741-00	CERAMIC	0.001MF	10%	400V	
C214	1-123-332-00	ELECT	47MF	20%	25V	
C215	1-101-005-00	CERAMIC	0.022MF		50V	
C216	1-101-005-00	CERAMIC	0.022MF		50V	
C217	1-123-379-00	ELECT	0.47MF	20%	50V	
		PLUG				
CNP201	1-508-765-00	3P PLUG (M)				
CNP202	♦1-508-766-00	4P PLUG (M)				
CNP203	♦1-508-786-00	2P PLUG (M)				
		DIODE				
D201	⚠ 8-719-503-06	DIODE S3WB60Z				
D202	8-719-193-04	DIODE 3P4M				
D203	8-719-000-28	THYRISTOR CR02AM-8				
D204	=>8-719-920-04	DIODE ERB12-04RK				
D205	=>8-719-931-20	DIODE EQB01-20				
D206	=>8-719-920-04	DIODE ERB12-04RK				
		FUSE				
F201	⚠1-532-203-00	FUSE, TIME-LAG T2A 250V				

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

B E D

Ref.No	Part No	Description				Remark
		COIL				
L201	1-407-177-XX	MICRO INDUCTOR 470UH				
L202	1-407-177-XX	MICRO INDUCTOR 470UH				
		TRANSISTOR				
Q201	=>8-729-178-54	TRANSISTOR 2SC2785				
Q202	=>8-729-178-54	TRANSISTOR 2SC2785				
		RESISTOR				
R201	1-217-262-00	WIREWOUND	12	10%	3W	F
R202	1-246-479-00	CARBON	1.8K	5%	1/4W	
R203	1-246-511-00	CARBON	39K	5%	1/4W	
R204	1-206-684-00	METAL	6.8K	5%	2W	F
R205	1-246-532-00	CARBON	300K	5%	1/4W	
R206	1-246-532-00	CARBON	300K	5%	1/4W	
R207	1-246-532-00	CARBON	300K	5%	1/4W	
R208	1-246-532-00	CARBON	300K	5%	1/4W	
R209	1-246-425-00	CARBON	10	5%	1/4W	
R210	1-246-511-00	CARBON	39K	5%	1/4W	
R211	1-246-501-00	CARBON	15K	5%	1/4W	
		TRANSFORMER				
T201	⚠ 1-421-526-00	COIL, CHOKE (FILTER, LINE)				
		THERMISTOR				
THP201	1-806-371-00	POSISTOR PTH60K01BF301M300				

****

♦: 1-606-260-00 E BOARD
****

		SWITCH				
S501	1-553-926-00	SWITCH, PUSH				

****

♦: 1-606-259-00 D BOARD
****

		DIODE				
D401	8-719-914-33	DIODE PG3432SY				
D402	8-719-930-51	DIODE GL-3HY1				
D403	8-719-930-51	DIODE GL-3HY1				
		SWITCH				
S401	1-553-766-00	SWITCH, KEY BOARD				

Ref.No	Part No	Description	Remark
		MISCELLANEOUS **********	
	⚠ 1-534-817-XX	CORD, POWER	
S001	⚠ 1-554-021-00	SWITCH, SEESAW (AC POWER)	

****

ACCESSORIES AND PACKING MATERIALS
****

Part.No	Description	Remark
2-291-535-00	BAG, PROTECTION	
2-291-536-00	CUSHION	
2-360-517-00	INDIVIDUAL CARTON	
3-701-623-00	BAG, POLYETHYLENE	
3-701-629-00	BAG, POLYETHYLENE	
3-783-891-41	MANUAL, INSTRUCTION	

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

- =>: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.
- Items marked " ♦ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

STANDARD PARTS LIST

ELECTROLYTIC CAPACITORS

CAP. (μF)	RATING → : Use the high voltage rated one.						
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.	63 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47						→	→
1.0						→	→
2.2						→	→
3.3						→	→
4.7				→	→	→	1-123-369-00
10			→	→	→	1-123-356-00	1-123-370-00
22			→	1-123-330-00	→	1-123-357-00	1-123-371-00
33	→	→	1-123-318-00	→	1-123-343-00	→	1-123-372-00
47	→	1-123-306-00	→	1-123-332-00	→	1-123-359-00	1-123-373-00
100	→	1-123-307-00	→	1-123-333-00	1-123-345-00	1-123-360-00	1-123-374-00
220	→	1-123-308-00	1-123-321-00	1-123-334-00	1-123-346-00	1-123-361-00	1-123-375-00
330	→	1-123-309-00	1-123-322-00	1-123-335-00	1-123-347-00	1-123-362-00	1-123-376-00
470	1-123-298-00	1-123-310-00	1-123-323-00	1-123-336-00	1-123-348-00	1-123-363-00	1-123-377-00
1000	1-123-299-00	1-123-311-00	1-123-324-00	1-123-337-00	1-123-349-00	1-123-364-00	1-123-378-00
2200	1-123-300-00	→	1-123-325-00	1-123-338-00	1-123-350-00		
3300	1-123-301-00	1-123-313-00	1-123-326-00	1-123-339-00			
4700	1-123-302-00	1-123-314-00	1-123-327-00				
6800	1-123-303-00	1-123-315-00					
10000	1-123-304-00						

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	1-123-379-00			
1.0	1-123-380-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-381-00	1-123-026-00	1-123-027-00	1-123-028-00
3.3	1-123-382-00	1-121-707-00	1-123-004-00	1-123-006-00
4.7	1-123-383-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-123-384-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-123-385-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-123-386-00	1-121-757-00		
47	1-123-387-00	1-121-919-00		
100	1-123-388-00			
220	1-123-389-00			
330	1-123-390-00			
470	1-123-391-00			

CERAMIC CAPACITORS

CAP. (pF)	RATING 50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,000pF

MYLAR CAPACITORS

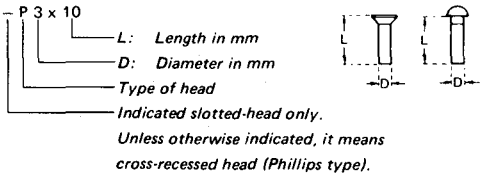
CAP. (μF)	RATING 50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.	CAP. (μF)	50 VOLT.	100 VOLT.	200 VOLT.
	PART No.	PART No.	PART No.		PART No.	PART No.	PART No.		PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00		
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00		
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00		
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00		
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				

1/4 WATT CARBON RESISTORS

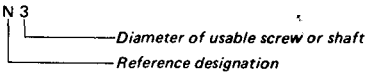
Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation

TV and Consumer Video Group

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